

Lane Construction
Aroostook County
Houlton, Maine
A-286-71-H-A (SM)

Departmental
Findings of Fact and Order
Air Emission License
Amendment #1

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Lane Construction (Lane), located in Houlton, was issued air emission license A-286-71-G-A/N on August 20, 1999, permitting the operation of their hot mix asphalt plant and their crushed stone and gravel facility.

Lane has requested a minor modification to add three generators to the license, increase the fuel usage for the generators from 36,000 gallons per year to 40,000 gallons per year, decrease asphalt plant fuel useage from 720,000 gallons per year to 600,000 gallons per year and change facility wide fuel sulfur limit to 0.35% by weight.

B. Revised Emission Equipment

Other Fuel Burning Equipment

Equipment	<u>Date of Construction</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	Stack #
Diesel Generator	1990	2.1	15.2	#2 fuel oil, 0.35%S	D1
Genset 3412	1998	3.9	28.3	#2 fuel oil, 0.35%S	G1
Genset D330	1990	1.1	8.0	#2 fuel oil, 0.35%S	G3
Night Generator*	1998	0.17	1.2	#2 fuel oil, 0.35%S	G4

Bold depicts new unit.

*Noted for inventory purposes only (less than 0.5 MMBtu/hr).

C. Application Classification

The application for Lane includes the licensing of new units and increased emissions, therefore the license is considered to be a minor modification.

II. BEST PRACTICAL TREATMENT

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

A. New Diesel Units

Genset 3412 has an approximate power rating of 556 HP, based on a heat input of 3.9 MMBtu/hr and Genset D330 has an approximate power rating of 157 HP based on a heat input of 1.1 MMBtu/hr; each based on 35% efficiency. BACT for the new diesel units is the following:

1. Total annual diesel fuel use in the diesels is limited to 40,000 gallons.
2. Chapter 106 regulates fuel sulfur content, however the use of 0.35% sulfur by weight fuel is more stringent and shall be used.
3. SO₂ emission data was based on fuel sulfur mass balance.
4. NO_x, CO and VOC emission limits are based upon AP-42 data dated 10/96 for diesel engines less than 600 horsepower.
5. PM and PM₁₀ emission rates were based upon BACT of 0.12 #/MMBtu.
6. Opacity from each diesel unit shall not exceed 20% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.

B. General Process Emissions

Visible emissions from a general process (including conveyor belts) shall not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

C. Revised Facility Emissions

- 600,000 gallons per year #2 fuel oil (0.35% sulfur) and specification waste oil (0.7% sulfur) in the rotary kiln
- 40,000 gallons per year diesel fuel, (0.35% sulfur by weight maximum) in the diesel units

(all based on a 12 month rolling total)

Total Annual Emissions for the Facility
(used to calculate the annual license fee)

Pollutant	Asphalt Plant	Generators	Total Tons/year
PM	6.7	0.3	7.0
PM ₁₀	6.7	0.3	7.0
SO ₂ *	29.6	1.0	30.6
NO _x	17.8	12.2	30.0
CO	59.3	2.6	61.9
VOC	1.2	1.0	2.2

*Asphalt Plant SO₂ TPY based on firing 0.7% specification waste oil.

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Based on the above total facility emissions, Lane is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

will receive Best Practical Treatment,
will not violate applicable emission standards,
will not violate applicable ambient air quality standards in
conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-286-71-H-A, subject to the conditions in license A-286-71-G-A/N in addition to the following conditions:

The following shall replace Condition (16)(G) of Air Emission License A-286-71-G-A/N:

(16) Asphalt Plant

G. The asphalt rotary dryer shall be limited to a maximum of 34.0 MMBtu/hr heat input. Lane shall be limited to the use of 600,000 gal/year of #2 fuel oil (0.35% sulfur by weight maximum) and specification waste oil (0.7% sulfur by weight maximum) (12 month rolling total). Emissions from the baghouse shall not exceed the following:

<u>Pollutant</u>	<u>grs/dscf</u>	<u>lb/hr</u>
PM	0.03	5.40
PM ₁₀	n/a	5.40
SO ₂ *	n/a	23.97
NO _x	n/a	14.40
CO	n/a	48.00
VOC	n/a	0.98

*SO₂ emissions based on 0.7% sulfur specification waste oil.

The following shall replace Condition (19) of Air Emission License A-286-71-G-A/N:

(19) Diesel Units

A. Combined fuel use in the Diesel Generator, Genset 3412 and Genset D330 shall not exceed 40,000 gal/year of diesel fuel (12 month rolling total), with a sulfur content not to exceed 0.35% by weight. Fuel use records and receipts (showing the quantity and percent sulfur of the fuel) for the diesel engines shall be maintained to demonstrate compliance.

[MEDEP Chapter 115, BPT]

B. Emissions from the Diesel Engine shall be limited to the following [MEDEP Chapter 115, BPT]:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.25
PM ₁₀	0.25
SO ₂	0.75
NO _x	9.26
CO	2.00
VOC	0.74

C. Emissions from Genset 3412 shall be limited to the following [MEDEP Chapter 103 and Chapter 115, BPT]:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	0.47
PM ₁₀	n/a	0.47
SO ₂	n/a	1.39
NO _x	n/a	17.20
CO	n/a	3.71
VOC	n/a	1.37

D. Emissions from the Genset D330 shall be limited to the following [MEDEP Chapter 115, BPT]:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.13
PM ₁₀	0.13
SO ₂	0.39
NO _x	4.85
CO	1.05
VOC	0.39

- E. Visible emissions from the Diesel Engine shall not exceed 30% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.
[MEDEP Chapter 101]
- F. Visible emissions from Genset 3412 and Genset D330 each shall not exceed 20% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.
[MEDEP Chapter 101]

The following shall replace Condition (20) of Air Emission License A-286-71-G-A/N:

(20) Stockpiles and Roadways

Visible emissions from a fugitive emission source shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour.
[MEDEP Chapter 101]

The following are new conditions:

(24) General Process Sources

Visible emissions from any general process source shall (including conveyor belts) not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.
[MEDEP Chapter 101 and Chapter 115, BPT]

- (25) Lane shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).

(26) **Payment of Fees**

Lane shall pay the annual air emission license fee within 30 days of **June 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3. [38 MRSA §353-A]

DONE AND DATED IN AUGUSTA, MAINE THIS _____ DAY OF _____, 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-286-71-G-A/N.

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 18, 2003

Date of application acceptance: January 22, 2004

Date filed with the Board of Environmental Protection: _____

This order prepared by Mark E. Roberts, Bureau of Air Quality.